

second insulating layer by use of a reactive gas containing carbon atoms and at least one of oxygen atoms, hydrogen atoms and nitrogen atoms.--

IN THE SPECIFICATION:

Please replace the paragraphs beginning on page 4, line 15, and ending on page 9, line 19, with the following new paragraphs:

-- A dry etching method according to a first aspect of the invention comprises: sequentially laminating a first insulating layer containing carbon and a second insulating layer containing carbon on a substrate; patterning the second insulating layer to form a mask; forming grooves in the first insulating layer by etching the first insulating layer with the second insulating layer used as a mask such that each of the grooves has a side surface and a bottom surface in the first insulating layer; and removing the second insulating layer by use of a reactive gas containing carbon atoms and at least one of oxygen atoms, hydrogen atoms and nitrogen atoms.

A semiconductor device manufacturing method according to a second aspect of the invention comprises: sequentially laminating an insulating layer and a photoresist each containing carbon on a semiconductor substrate; patterning the photoresist to form a mask; forming interconnection grooves in the insulating layer by etching the insulating layer with the photoresist used as a mask such that each of the interconnection grooves has a side surface and a bottom surface in the insulating layer; ashing and removing the photoresist by use of a gas containing carbon atoms and at least one of oxygen atoms, hydrogen atoms and nitrogen atoms; and depositing a metal interconnection layer in the interconnection grooves to form interconnections therein.

A semiconductor device manufacturing method according to a third aspect of the invention comprises: sequentially laminating an insulating layer and a first photoresist on a semiconductor substrate; patterning the first photoresist to form a mask; forming first interconnection grooves by etching the insulating layer with the first photoresist used as a mask; ashing and removing the first photoresist by use of a gas containing carbon atoms and at least one of oxygen atoms, hydrogen atoms and nitrogen atoms; burying a carbon layer in the first interconnection grooves; laminating a second photoresist on the insulating layer to cover the carbon layer; patterning the second photoresist to form a mask; forming second interconnection grooves by etching the carbon layer with the second photoresist used as a mask such that each of the second interconnection grooves has a side surface and a bottom surface in the carbon layer; ashing and removing the second photoresist by use of a gas containing carbon atoms and at least one of oxygen atoms, hydrogen atoms and nitrogen atoms; depositing a metal interconnection layer in the second interconnection grooves to bury interconnections therein; forming a porous silicon oxide layer on the interlayer insulating layer to cover the interconnections and the carbon layer; and heating the carbon layer to remove the same from the interconnection grooves and provide a hollow around each of the interconnections.--

IN THE CLAIMS:

Please cancel claims 1 – 20 without prejudice or disclaimer of their subject matter, and add new claims 21 – 40 as follows.

--21. A dry etching method, comprising:

sequentially laminating a first insulating layer containing carbon and a second insulating layer containing carbon on a substrate;